

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

DATA ENGINE TECHNOLOGIES LLC,

Plaintiff,

v.

GOOGLE INC.,

Defendant.

C.A. No. 14-1115-LPS

**DECLARATION OF DR. JOHN D. KUBIATOWICZ
IN SUPPORT OF GOOGLE INC.'S INITIAL CLAIM CONSTRUCTION BRIEF**

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*Attorneys for Defendant
GOOGLE INC.*

Dated: November 3, 2015

I. Introduction

1. My name is Dr. John D. Kubiawicz. I am a Full Professor of Computer Science at the University of California, Berkeley, and have been retained by Google Inc. (“Google”). I submit this declaration in support of Google’s Initial Claim Construction Brief directed to the construction of the disputed claim terms in the five patents asserted by Data Engine Technologies LLC (“DET”), U.S. Patent Nos. 5,303,146 (“the ’146 patent”), 5,590,259 (“the ’259 patent”), 5,784,545 (“the ’545 patent”), 5,282,551 (“the ’551 patent”), and 5,623,591 (“the ’591 patent”).

2. I have concluded that claim 1 of the ’551 patent fails to comply with the requirements of the Patent Act, 35 U.S.C. § 112(b) (“§ 112(b)”), formerly 35 U.S.C. § 112, ¶2 (2012). Specifically, based on my review of claim 1 of the ’551 patent, the specification, and file history, I conclude that the phrase “storing said first and second pages of the plurality of cell matrices such that they appear to the user as being stored within a single file” is indefinite as to prevent a competitor from ascertaining the meaning of the claim with any degree of confidence because the phrase is entirely subjective to a user.

II. Rate of Compensation

3. I am being compensated at my customary rate of \$550 per hour for my work in this litigation. I am a citizen of the United States and my professional address is at 673 Soda Hall #1776, Berkeley, CA 94720-1776.

III. Qualifications

4. I have a PhD in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology (MIT). I also have a Masters degree in Electrical Engineering and Computer Science and two Bachelors degrees (one in Electrical Engineering and another in

Physics) from MIT as well. My research specialties include parallel operating systems, distributed (cloud) storage systems, multiprocessor computer architecture, and computer aided design for quantum computers. In December of 2002, I was selected as one of the top-50 researchers and policy makers by Scientific American; in December of 2003, I was selected as one of the “people to watch” for 2004 by US News and World Report. A copy of my *curriculum vitae* is attached as Exhibit A to this declaration.

5. As a graduate student at MIT, I designed and implemented hardware and operating systems components for the Alewife research multiprocessor. Alewife included a directory-based cache coherence protocol, called “LimitLESS,” which I helped to design with others in my research group. Many research papers were written about this machine. As chief machine architect, I implemented the Communications and Memory Management Unit chip (CMMU) that kept the first-level caches coherent on up to 512 processors and helped to write the software protocol handlers that supported the LimitLESS protocol. In the late 1980s and most of the 1990s, I participated in research conferences on computer architecture which published research on cache coherence protocols and on the design of multiprocessors with hardware and software cache coherence. Examples included the International Symposium on Computer Architecture (ISCA) and the International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS). Thus, I was keenly aware of research and design efforts in the area of cache coherence in general. I interacted with design teams at various universities, including Stanford, Wisconsin, Princeton and Rice.

6. During that time period, I also consulted with IBM as an operating-systems developer assigned to Project Athena. I worked on early versions of file systems such as NFS (Sun

Microsystems) and AFS (Carnegie Mellon University); such work included debugging OS internals on AIX and Berkeley Unix at the device-driver level.

7. As a faculty member, I have designed network storage and routing systems, worked with and modified network device drivers, and designed a new multicore operating system from the ground up. I am familiar with the organization and design of a number of Unix variant operating systems. I am familiar with the basic structure of device drivers, and have debugged device drivers and systems components for several different operating systems.

8. I designed the Alewife multiprocessor while still in graduate school, shortly after receiving my undergraduate degree. I have taught computer design classes to undergraduates at Berkeley in which students learned the elements needed to understand both bus-based and directory-based cache-coherence protocols. I have also taught Operating Systems classes to undergraduates, which include extensive discussions of the design and implementation of file systems.

9. Because of my education, experience, and position as a professor of Computer Science at Berkeley, I am well versed in the concepts that one skilled in the art of spreadsheet applications and software user interfaces would be familiar with. I have sufficient skill to evaluate the above-mentioned patents relating to electronic spreadsheet user interface features.

IV. Level of Ordinary Skill in the Art

10. The design of spreadsheet user interfaces and data entry functionalities is something that a person of ordinary skill in the art at the time of filing the patents-in-suit (the early 1992 time period) could handle. In my opinion a person of ordinary skill in the art would be a person with a Bachelor's degree in Computer Science or equivalent combination of coursework, and two or

more years of experience working as a programmer or software user interface designer with general familiarity with databases and/or spreadsheet-style applications.

V. Claim 1 of the '551 Patent is Indefinite

11. It is my understanding from counsel that the Patent Act requires that through the patent claims, an applicant must particularly point out and distinctly claim the subject matter which he regards as his invention. 35 U.S.C. § 112, ¶2 (2012). It is further my understanding from counsel that, construing this provision, the Federal Circuit has instructed that “the language of the claims must make it clear what subject matter they encompass.” *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1562-63 (Fed. Cir. 1996). An applicant meets this requirement by providing claims having readily understandable boundaries of claim scope. The statutory requirements are referred to as “definiteness” or “distinctly claiming.” The task for determining if a claim is sufficiently definite focuses on whether one of ordinary skill in the art would understand the boundaries of the claim.

12. Claim 1 of the '551 patent requires that the first and second pages of the plurality of cell matrices “appear” to the user as being stored within a single file. In my opinion, this requirement is subjective because it depends solely on each individual user’s perception of how the matrices may be stored.

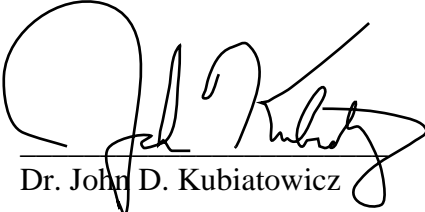
13. The specification and prosecution history of the '551 patent is devoid of the required descriptive support, either explicitly or inherently, to explain what a user must observe in order for it to “appear” that the matrices have been stored within a single file. In particular, the specification states that the notebook interface of the present invention provides a “means for organizing many spreadsheets together into one file” and that a disk file can have the same name

as the title of a notebook. ('551 patent, 11:26-47; 15:30-54). However, the specification fails to provide an objective way to determine how the matrices must “appear” to the user.

14. I have reviewed DET’s proposed construction of the term “storing said first and second pages of the plurality of cell matrices such that they appear to the user as being stored within a single file,” and understand that DET proposes that the term means “storing said first and second pages of the plurality of cell matrices such that they are accessible to the user by a single file name.” It is my opinion that DET’s proposed construction ignores the phrase “appear to the user” in the disputed term. It is further my opinion that DET’s proposed construction fails to provide an objective standard for how the matrices must “appear” to the user.

I declare to the best of my knowledge, information, and belief, under penalty of the laws of the United States, that the foregoing is true and correct.

November 3, 2015



Dr. John D. Kubiawicz

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on November 3, 2015, I caused the foregoing to be electronically filed with the Clerk of Court using CM/ECF, which will send notification of such filing to all registered participants, and have sent true and correct copies by electronic mail to the following:

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